

SHROUDLINES

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What's Inside

| | |
|----------------------|---|
| Ignition! | 1 |
| Bill's Something #20 | 2 |
| Another Glue Choice | 3 |
| Parachute Attachment | 6 |
| Parting Shots | 8 |

Jacob Mehr catches a great shot of Chris Bender's rocket lifting off in Gunter.

Ignition!

By Gary Briggs

Summer is upon us and it is getting hot. It makes for a challenging time to build (non-air conditioned anyway) and for hot launches where special attention needs to be paid to hydration and shade. We have been fortunate this year to not have too much dry ground cover, but is likely to change a summer rolls along and things dry out as they almost always do in Texas. Keep an eye on your fellow flyers and the field for any signs of trouble at the launches this summer.

Speaking of fields, Gunter has, at least temporarily, filled in for the loss of the Frisco field to development. The field has supported 2 sport launches with one of those also supporting the DARSTAR contest launch. Its not quite as close, but the space opens up many more possibilities of things that can be flown there.

This doesn't negate the fact that we still need to be on the look out for more flyable fields. In the North Texas area our lifespan on any given field is limited by a function of how quickly development makes it to that spot. Think about who you know that owns some wide open spaces that wouldn't mind a few rocketeers coming out once a month or so to fly some really cool stuff.

On the memory lane and family side, June marked the graduation of Alyssa from High School and Josh getting married. It seems like just yesterday we were dragging them out to the rocket field to watch dad fly some rockets and

put up a few flights of their own as well. They grow up so fast...



Above is a shot of Josh and Dad at Rockwall in 2004 flying the Redstone and the Big Bertha which has the original fins from my 70s build.

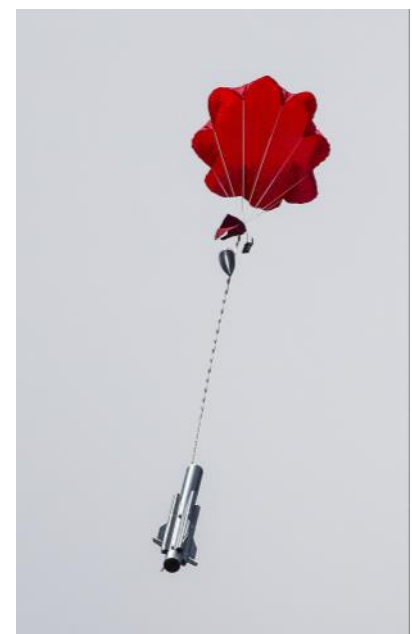


I won't make Alyssa get in the way -back machine... Here she is in

2013 about to take out the completion at the Fall Classic with her Dr. Who Callbox.

Well that brings us to content. I have to say that it has been a struggle of late to get enough words on paper to put out a quality newsletter. I like to think that the newsletter still has a place in the club, but it may be that the digital world has taken it over. I still think there are good stories out there for some format that goes deeper than Facebook, but I could just be out of touch. I need the members to determine if this is important.

In the meantime, this issue covers a couple of articles and, of course, some pictures. Chuck Crabb tests out some new glue that he found at Harbor Freight. George Sprague then puts some ideas out there on parachute attachment. We follow that with pictures from Jacob Mehr and Chris Bender in Parting Shots. Here they are together again, Jacob's picture of Chris' rocket.



Bill's Something #20 - Where have I been; where are you going?

By Bill Gee

Several people have asked whether I was getting out of the hobby. They cited observations that I have not been to launches, have not been seen taking pictures, have not been to national events and do not have a presence on the forums.

The answer is no, I am not quitting rocketry though I have dialed back my participation substantially for a variety of reasons.

I admit that I have been guilty of taking what had been our regular and reliable Frisco launch schedule for granted. It had become too easy to decide not to go if there was any indication that it was going to be too hot, too cold, too windy or too wet...which was much of the time in the past year or two. Huge mistake now that the field is no more.

My photographic equipment is dated. The lithium battery packs I had been using to power my still camera have been dying, one by one; they are no longer commonly available. Many cameras are now available which produce better results; many people now have them and know how to use them. My newest video gear is Digital-8; very obsolete in every sense of the word.

I have OCD. If I cared about something, the thought of missing out on any of it really bothers me. On the other hand, if I decide that I did not care, I do not feel the loss at all. That is the story about missing out

on seeing great flights. That is also the story with the forums. I used to be active on the Rocketry Forum, but the frequent deletion or editing of posts and even entire threads there took its toll on my sanity; I finally gave it up sometime in 2007 or 2008. Before the big database crash and the many changes in ownership since. I got back into forums with Ye Olde Rocket Forum as a result of the Apollo 7 Anniversary Saturn 1B build. But it too fell victim to creeping moderation. I took a holiday of several months around the time my friend Jonathan Dunbar was banned. I did go back since but the place has changed. The owner has decided that more moderation was better than very little and last summer, I decided it was no longer worth it to me.

My last national event was NARAM in Michigan in 2012. I could not justify the expense with most of my other bills going up, some quite substantially. I was surprised the other day when Jack Sprague thought that I was still going every year. Some of you have been talking about going to NARAM in Missouri. I totally recommend it. If you do any communicating with people living elsewhere, the opportunity to meet face-to-face is underrated. NARAM is much more than a week-long rocket launch. Many of the evening activities are compelling, from the auction of rare and no so rare rocketry items to the tradition of beer lofting. If you want to go to

NARAM, go to one. Everyone should go to at least one. Do not bring NARAM here because that is a totally different experience. Hosting one is much more work than fun and not being away from home does not allow you to immerse yourself in all of the things NARAM offers.

The final reason is my discovery of makerspaces - the Dallas Makerspace in Carrollton and TheLab.ms in Plano. That is where I have been spending much of my free time for the past year. It started with a discussion with Buzz about the tools at DMS and their application to building better rockets. But I discovered a real love for programming microcontrollers and the joy of collaboration. I still intend to master the laser cutter, the 3D printer, the lathe, the CNC router, the vinyl cutter, the airbrush, all for building better rockets, but that has been postponed for awhile.

I am still club secretary and I still write something for this newsletter. I'll keep doing it as long as you want me to. I am still building and I promise that I will be out there flying more, well maybe once it cools off a bit...

If you would like to discuss this further, post your comments to the DARS-General Yahoo group at <http://groups.yahoo.com/group/DARS-General> where I like to hang around.

Another Choice in Glue

By Chuck Crabb

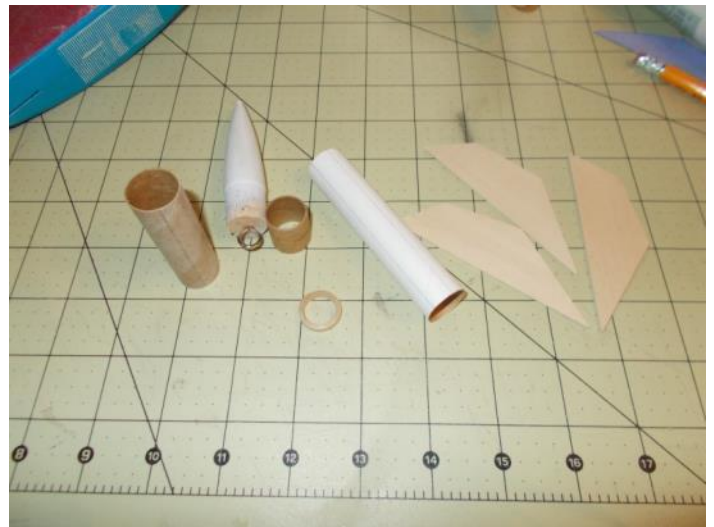
One day recently at one of my favorite stores, Harbor Freight, I wandered down the aisle with the glues and decided to take a flyer on a \$3 bottle of HFT Wood Glue. I don't know what made me buy it, as I already had several bottles of wood glue: Elmer's, Gorilla, Titebond Clear, and Titebond Molding and Trim glue. I also have several bottles of Elmer's Glue-All for those uses where wood glue may be problematic (installing couplings, engine mounts, etc.)



My initial impression of this glue was disbelief at how thick this glue is. It seemed like a great choice for fillets, and a likely replacement for the hard-to-find Titebond Molding and Trim (aka No Run, No Drip). I built a couple of rockets using this glue for the fillets, and this glue proved to be a great choice for fillets. You can apply it to all of the fins on your rocket at one time, and shape it easily with a wet fingertip.

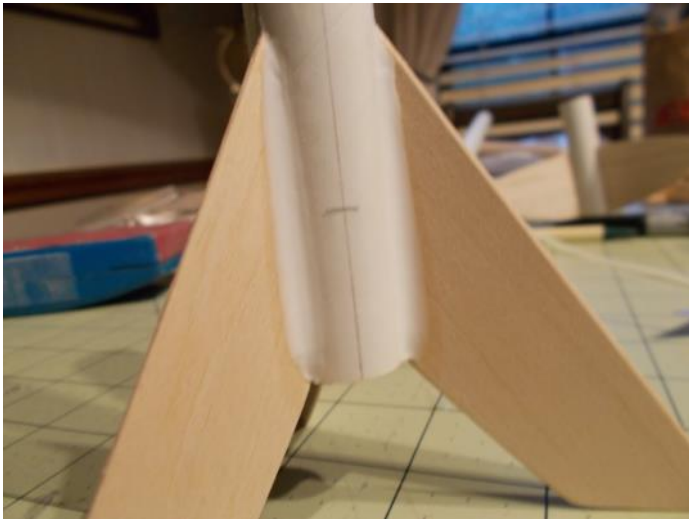
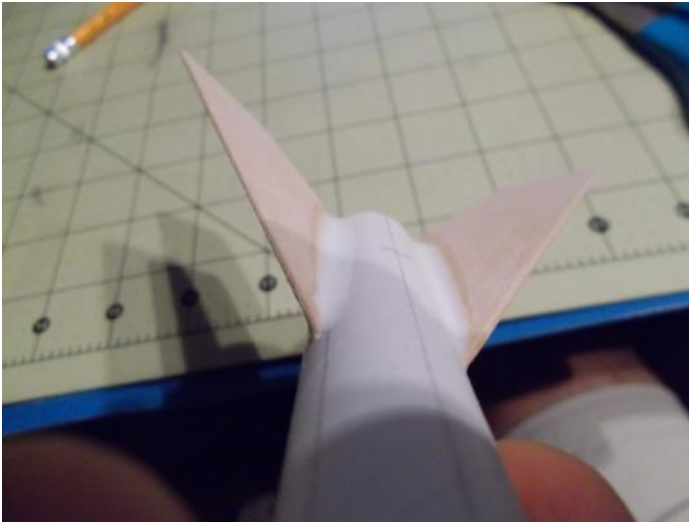
I became curious how it would work as an all-purpose glue, and wanted to test its strength and

usability, and see what limitations it may have. To do this, I built a test rocket from bits and pieces of my scrap bin starting with some short pieces of BT-20 and a coupler. I added a thrust ring, some basswood fins, and a scrap balsa nosecone to help with the CG to the pile of parts. The fins were intentionally made to extend well back from the body tube for two reasons, one, I needed to move the CP back as far as possible, and two, to put additional stress on the glue joint during flight and landing.



There were no surprises during the build. I was able to insert the coupler without it seizing, and install the second body tube onto the coupler with ease. I was also able to turn the second tube in order to try to align the spirals. The fins were attached using the double glue method. I was actually concerned about trying this since the glue is so thick. My concern was unfounded, as the fins went on like any other build. Finally, I applied and shaped the fillets. It's really nice having thick glue like this so you can do all of the

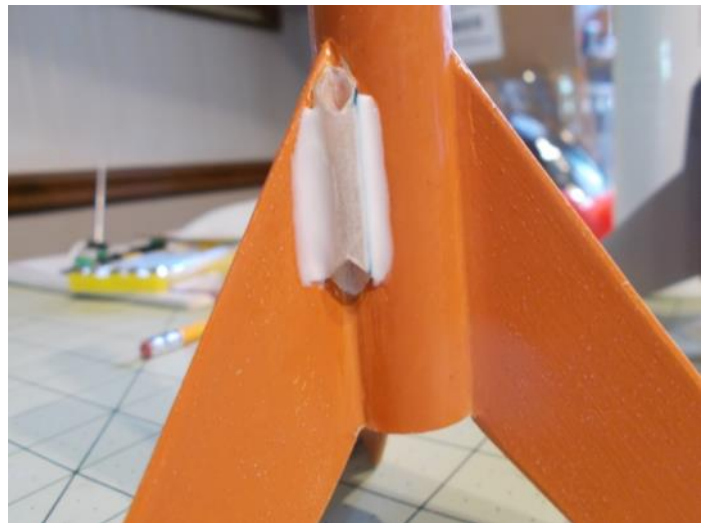
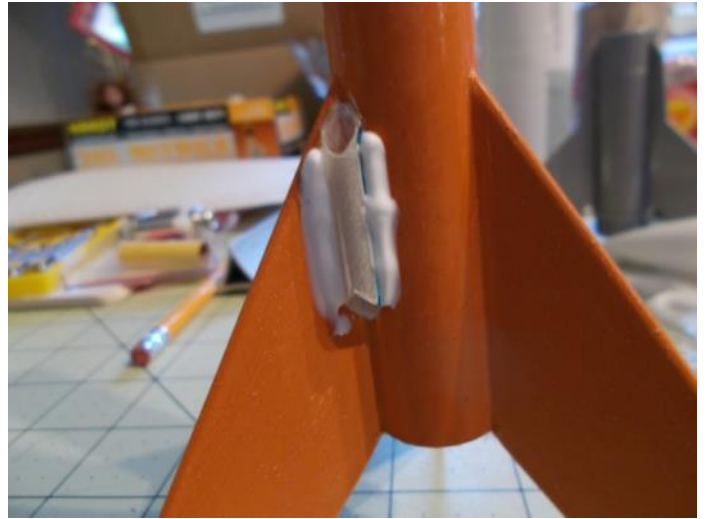
fillets at one time. Once the fillets were to my liking, I set the rocket aside to dry.



For the thrust ring, I applied a ring of glue in the body tube about a 1/2" shy of the ring's final position. I then used a spent motor to push the thrust ring into position. Again, there were no surprises. The thrust ring doubles as the attachment point for the Kevlar shock cord.

Once everything was dry, I gave it a quick sanding and a couple of shots of primer followed by a coat of a really ugly orange paint I have that I just can't seem to find any use for. The night before the June launch, I attached the streamer (again, from the scrap bin) and nose

cone and gave it a quick wet-sanding to improve performance to see if I could get the fins to detach themselves. At this point, I realized I hadn't attached a launch lug. Better now, than at the pad, right? I scrapped off a bit of the paint, glued on the lug (scavenged from a crashed glider), applied and shaped the fillets.



My plan was to fly a B6, then a C6, and if all of the bits were still in the right places (and the rocket wasn't lost), I had a D10 on hand to see how well the glue joints would hold.

At the June launch, I prepped the rocket with a bit of wadding and a B6-6. The flight went exactly as expected, and recovery was nominal.



According to OpenRocket, this flight reached 970' and 300mph. I'd say the altitude was about right, but have no idea if the predicted speed is correct. When I finally got to the rocket, I found all of the parts where they were supposed to be. So far, so good.

My planned flight on the C6 didn't happen, as the Kevlar shock cord burned through, so another flight was out of the question. I was sorely disappointed,



as I was really looking forward to wandering about the Gunter field looking for the rocket in the heat.

I have already repaired the shock cord, using more of the HFT glue, and a strip of paper. I made several knots in the end of the Kevlar cord, and glued this to a 1/2" x 1" strip of copy paper, and glued the whole thing into the rocket far enough down to clear the nose cone shoulder. I then covered the strip of paper with a smear of glue. With the length of Kevlar I put in this (about 36"), there shouldn't be much stress on the new mount, but you never know. Some of those Estes ejection charges can be surprisingly violent.

Next month we'll see how the rocket holds up to a C (and maybe a D) motor. In the meantime, I'm going to build another model or two to continue testing this glue.

A word of caution - the glue needs to be stored upside down or at least angled down so the glue stays near the nozzle. Otherwise, you'll have quite a wait to get the glue to the nozzle

Parachute Attachment

By George "The Other" Sprague

Ever had this happen? You send one of your favorite model rockets up on a C6-5 motor, you watch it blast off the pad, soar high in the sky, you hear the 'pop' of the ejection charge and.. uh oh, the shock strap broke! There goes your nose cone with the parachute attached, floating off towards the horizon, The body tube tumbles to the ground, but the nose cone goes away...way away.

Here is a way to enhance the probability of recovering your nose cone and body, minus the parachute. It's quite easy. Attach the parachute to a snap swivel, the kind found at your local fishing supplies department. Then, instead of attaching the swivel to the nose cone, attach it on the shock strap so that it slides



That's it! If the shock strap breaks, the parachute slides off the recovery strap and floats off while the nose cone and body tube tumble down, hopefully close enough so you can go find them

What about mid power rockets? Maybe you want to attach the parachute more or less half way down the

shock strap, which can help in preventing the main body from swinging through the parachute



Or you want to attach your Jolly Logic 'Chute Release on the shock strap with the main parachute, and a small drogue parachute on the nose cone. Here is one way: use a quick link – wrap the shock strap once around the quick link (Picture 3). You can also attach the parachute to the link, and the 'Chute Release lanyard (right, Chris?). The quick link will not slide upon deployment due to the tension of the shock strap.

And that's it! Quick, simple, and easy to do!



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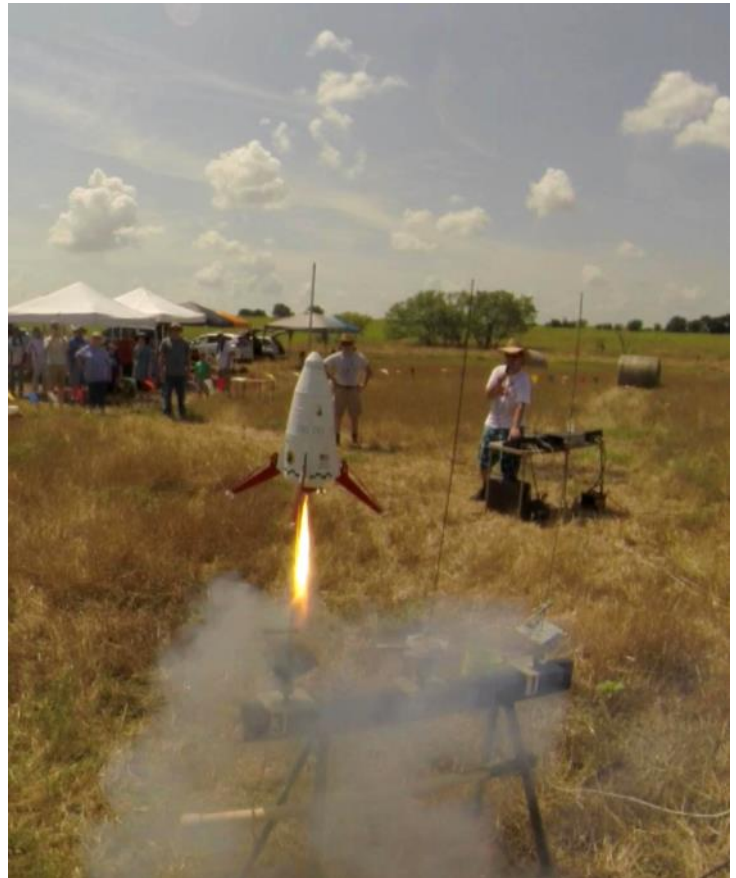
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Parting Shots

Photos by Various Artists

This page by Chris Bender, next page by Jacob Mehr



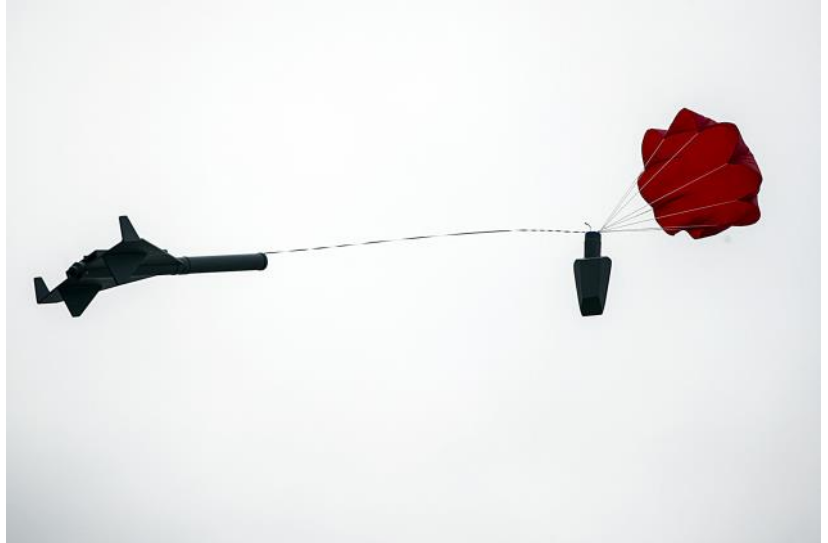




Photo by
Chris Bender

How to Contribute to Shroudlines



We all share a love for the rocketry hobby and all have different experiences and expertise to share. You don't have to be a Pulitzer Prize winner to write for this publication. Anyone can do it!

Submissions can be in the form of plain text files, emails, or MS Word documents. Pictures can be of most any format, but .jpg files are generally the norm. Keep the content family friendly and free of political discussion; just rocketry.

We publish every 2 months so we need your content submitted by the 15th of an even numbered month (.i.e. February 15, April 15, June 15, etc.). You can submit via the contacts page on dars.org or direct to the editor at garyb2643@att.net.

DARS Officers

| | |
|--------------------|---------------|
| President | Jack Sprague |
| Vice President | Sam Barone |
| Treasurer | Suzie Sprague |
| Secretary | Bill Gee |
| NAR Senior Advisor | Chuck Crabb |

Upcoming Events

| | |
|------|------------------------------|
| 7/2 | Business Meeting—Coppell |
| 7/9 | Monthly Launch—Gunter |
| 7/16 | Moon Day—Frontiers of Flight |
| 8/6 | Business Meeting—Coppell |
| 8/20 | Monthly Launch—Gunter? |

The Dallas Area Rocket Society is a non-profit chartered section of the National Association of Rocketry ("NAR"). Its purpose is to promote the hobby of consumer rocketry in the Dallas/Ft. Worth metropolitan area.

Membership in DARS is open to all interested persons. Membership in NAR is encouraged, but not required. Annual dues are \$10.00 for individuals and \$15.00 for families. The entire family, including children, are welcomed to the meetings. Go to the website, fill out and send in an [application](#), to join or renew your membership.

The club normally meets on the first Saturday of each month at 1:00 p.m. and the current meeting location is in Coppell, just off the Sam Rayburn toll way and Denton Tap Road.

Visit the DARS website for the meeting location: www.dars.org